The emerging social science literature on health technology assessment: a narrative review

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Precis: Social scientists contribute valuable critical perspectives to the study of health technology assessment but leave some important questions unanswered.

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Abstract

Objectives: To provide an overview of existing social scientific literature on health technology assessment (HTA), with a focus on sociology and political science and their subfields.

Methods: Narrative review of key pieces in English.

Results: Three broad themes recur in the emerging social scientific literature on HTA: the drivers of the establishment and concrete institutional designs of HTA bodies; the effects of institutionalized HTA on pricing and reimbursement systems and the broader society; and the social and political influences on HTA decisions.

Conclusions: Social scientists bring a focus on institutions and social actors involved in HTA, using primarily small-N research designs and qualitative methods. They provide valuable critical perspectives on HTA, at times challenging its otherwise unquestioned assumptions. However, they often leave aside questions important to the HTA practitioner community, including the role of culture and values. Closer collaboration could be beneficial to tackle new relevant questions pertaining to HTA.

1. Introduction

This themed section of *Value in Health* asks why the use of health technology assessment (HTA) in healthcare decision-making varies widely across countries. Specifically, the issue is interested in how this diversity may be shaped by culture, values and institutions. These are the core topics that social scientists have explored extensively in other areas of health policy, such as health care reform[1–5], rationing/priority-setting[6–9], or pharmaceutical regulation[10–14]. Social science has so far paid less attention to HTA, a relatively new phenomenon: in 2003, a paper in *Social Science and Medicine* announced that "Despite its importance in governing the direction of innovation in health care delivery, there are hardly any empirical studies of HTA in practice"[15]. Since then, however, social

scientists have been increasingly attentive to HTA, and, as the present themed section demonstrates, the HTA community shows considerable interest in input from other disciplines.

We present a narrative review of the emerging empirical literature on HTA from several social scientific disciplines: sociology, political science, and their interdisciplinary subfields such as science and technology studies (STS), which is concerned chiefly with the social and political aspects of scientific practice and technology design and use, and political sociology / political economy, which focus on stakeholders' interests and strategies. The boundaries between these fields are permeable and, in the interest of interdisciplinarity, we avoid dwelling on them. Rather, we present a thematic narrative review of the common research questions, methods, and findings of social scientific scholarship on HTA. While we do not make any claims to exhaustiveness, this is, to the best of our knowledge, the first review of its kind.

After providing more details on our methods, we summarise the established policy analysis literature on HTA developed mostly by health economists and HTA practitioners. We then identify three broad themes recurrent in the emerging social scientific literature on HTA: the drivers of the establishment and concrete institutional designs of HTA bodies; the effects of institutionalized HTA on pricing and reimbursement (P&R) systems and the broader society; and the social and political influences on HTA decisions. We conclude with a brief discussion of social scientists' contributions to the study of HTA and suggest research avenues of interest to social science as well as HTA practitioners.

2. Methods

We reviewed key pieces on HTA from sociology, political science and their subfields. Inclusion criteria were: English language, mention of "health technology assessment" in the papers' title or abstract, and empirical content in the body of the paper. Given the difficulties of using conventional systematic review methods in social sciences, especially for multidisciplinary topics[16–18], we employed a step-wise quadruple search strategy. The basis for our search was our pre-existing social scientific bibliography on HTA, which we had been developing independently since 2010 (e.g.[19]). We

then used reference snowballing techniques to identify additional literature, specifically reference checking and citation search in Google Scholar[18]. Next, we searched (in October 2018) Google Scholar for keywords associated with key topics emerging from our expanded bibliography (e.g. "HTA + uncertainty of evidence" or "HTA + public engagement"). Finally, we searched for these terms manually in selected top-ranking journals in health policy, sociology, political science and their subfields, namely *Sociology of Health and Illness; Social Science and Medicine; Social Studies of Science; Minerva; Health Economics, Policy, and Law; Health Policy;* and *Journal of Health Policy, Politics and Law.*

This resulted in a body of 41 references (see Appendix 1), from which we extracted central topics, research questions, methodologies and disciplines. Based on the central topics and research questions, we inductively identified a set of common broad themes covered by the papers and agreed on their relevance through discussion among authors. We paid special attention to dissenting opinions among our team which could help us identify dissent within the literature[20]. We present the results in the form of a narrative review, which allows us to juxtapose "diverse forms of evidence" and literatures side by side[21] – in this case, the established HTA literature, typically written by health economists and other HTA practitioners, and the emerging social scientific scholarship. For the purposes of this review, we set (health) economics apart from other social sciences, and we also leave aside the important contributions of normative political theory and philosophy, as well as of the humanities and the law.

3. Results

3.1. The established literature on HTA

Since the early years of HTA in the 1980s, much of HTA scholarship has been made up of publications on the methodologies for assessment of health technologies and of evaluations of individual technologies, useful to academics and decision-makers. Not far behind were conceptual essays on the nature of HTA, its relationships to evidence-based medicine, P&R processes, and biomedical research and innovation[22–26]. HTA has also attracted the attention of philosophers and political and legal theorists[27–30] and a number of publications documenting its history emerged ([31–35]).

With one possible exception[36], a critical history of the rise of HTA as a discipline has yet to be written.

The vast majority of the social science literature is focused on studying HTA as national institutions and individual regulatory decisions – the policy analysis of HTA and P&R procedures, mostly written by health economists and other HTA practitioners. Health economists have an obvious disciplinary claim to HTA: they are the ones developing the necessary methodologies for quantifying and comparing value for money of health technologies. They also have a direct interest in understanding how their science is applied in practice – in appraisals and funding decisions. As a result, one of the three sections of the *International Journal of Technology Assessment in Health Care* has been since 2010 called "policies" (in addition to "methods" and "assessments"). Other journals, including *Value in Health*, have devoted special issues to overviews of HTA in selected countries[37]. The aim of these policy analyses is primarily descriptive: to document and compare what methods are used in different jurisdictions and how they compare internationally (e.g.[38–40]). In the rapidly evolving field of HTA, where policies change every couple of years, these records from individual countries provide valuable information. Insofar as HTA policy analysis has deeper analytical intentions, these are usually identifying various "barriers and opportunities" for the establishment, development, or increased use of HTA by decision-makers[41–43] (with exceptions, e.g.[44]). In these, political and societal factors are typically noted (often as "lack of political will" or "social acceptability" or "institutional capacity") but rarely discussed in detail. Along with other themes, they are, however, central to the social science on HTA.

3.2. The emerging social science literature on HTA

The emerging social scientific literature on HTA can be divided according to its three most common research themes: the drivers of the establishment and design of HTA bodies; the effects of institutionalized HTA on P&R, medical practice, and the broader society; and the social and political influences on HTA decisions.

3.2.1. What explains variations in how HTA is institutionalized and practiced?

The first question social scientists ask takes the adoption of HTA as a dependent variable: why are HTA bodies established? Conventional wisdom from HTA policy analysis would presume that HTA spreads through the world and that, sooner or later, countries without HTA will all create HTA agencies as a necessary tool to organise an efficient distribution of limited healthcare resources (e.g. [45–47]). However, some political scientists disagree with the presumption that HTA is inevitable. Functional pressures on healthcare can be very different across countries and therefore HTA may be promoted by local actors as a solution to very different problems[48,49]. For example, in Poland HTA was presented as a way of complying with EU legislation on pharmaceuticals and defining the basic benefit package, while some in the Czech Republic saw HTA as a tool to control spending on medical devices and diagnostics[50].

Others agree with the basic premise that HTA diffuses because of a functional pressure on public finances but offer important nuance. For example, a series of studies on Sweden, France and Germany[51–53] claims that "the emergence and continuing function of national [independent agencies] for HTA follows a broadly evolutionary pattern" but that within this evolution, "contextual factors play an important mediating role"[53]. What is mediated here are the concrete institutional, methodological and procedural aspects of HTA and its relationship to P&R in individual countries.

These differ starkly, as yet others have noted: no two HTA systems are the same and that none of the usual suspects (e.g. geography, GDP, timing of HTA institutionalization) explain this major institutional variation[54]. But institutional context in individual countries may help us understand the bodies' genesis and design. In France, for instance, the national regulatory context (pre-existing institutions with their own priorities and mandates) meant that the HTA body received a mandate which went well beyond cost-effectiveness analysis to pursue a range of mechanisms for containing healthcare spending[53]. Similarly, the fragmented multi-level nature of Canadian healthcare has conditioned the extent and nature of intra-Canadian cooperation of HTA bodies[55]. Further, conscious strategies of key actors may matter: functional pressures or historical administrative traditions of each

country may have less influence on what HTA bodies looks like than high politics, such as the left-right divide[56]. When given the chance, governments strategically shape the institutional design of HTA bodies according to their political preferences[57].

The use of specific methods for appraisal and assessment methods is also conditioned by their regulatory context. For instance, the use of the efficiency frontier in HTA in Germany (as opposed to cost-effectiveness threshold in the United Kingdom) is argued to be the result of different "regulatory spaces", inhabited by a multiplicity of public, private and non-government actors, value judgements and cultural norms, and power dynamics: it is unacceptable in Germany to mention healthcare rationing or describe health gains in monetary terms[51]. In short, context matters for why HTA bodies emerge and what they do.

Finally, some of the empirical social science literature looks at why politicians and policy-makers would want HTA in the first place. There are other alternatives to implementing a national HTA agency in the P&R toolkit, especially if cost-containment is the goal[49]. This could include reference pricing, reimbursement decision referencing (e.g.[58]), managed-entry agreements, and delaying or preventing market entry to expensive or new therapies. Delegating authority to specialised HTA bodies, however, serves multiple purposes for politicians, including creating a pool of experts capable of resolving complex problems, but also gaining legitimation by adopting an "evidence-based policy" discourse, and avoiding blame in case of controversial decisions[49,56,59]. Potentially, it also "*enhances* politicians' capacities to institute their ideological preferences within a set of concrete rules and 'expert' decision making procedures"[60]. Once established, arm's-length HTA agencies are shown to have significant staying power in the face of efforts to re-politicize decision-making[60–62] though not full immunity from politics, especially if the political costs are too high or the political calculus itself changes exogenously[60,63].

3.2.2. What are the effects of institutionalized HTA on reimbursement decisions and beyond?

Another strand of empirical social science literature takes the existence and characteristics of HTA systems as an independent variable and asks what its consequences are for P&R and broader healthcare systems. The transparency and inclusiveness of the assessment and appraisal process are among the key aspects of HTA that are theorized to matter for outcomes. Within the established HTA literature, health economists have produced a growing body of quantitative analyses examining the link between HTA agencies and their often diverging P&R decisions[64,65]. Differences in recommendations are thought to be due to an agency's approach to risk perception, the comparator choice used in clinical and cost-effectiveness studies[66], or the drug and disease characteristics[67]. Although countries with similar institutional setup of HTA tend to reach somewhat similar P&R decisions, comparable procedural setups (namely, who assesses evidence and when) played an unclear role[68]. "Process configuration", however, does not seem to have major effects on P&R outcomes – at least where evidence about a technology is strong; where evidence is uncertain, the inclusiveness of the HTA process (the number of stakeholders involved) increases the likelihood of a positive reimbursement decision[69].

Social scientists are similarly on the fence as to the impact of procedural aspects on P&R decisions. A large-N analysis of the impact of the design and procedures of HTA institutions (namely their transparency, inclusiveness to stakeholders, and consensus / majority voting) found only weak statistical evidence for any influence on reimbursement outcome[70]. A qualitative Hungarian case study explains the limited influence of HTA on P&R outcomes by the lack of transparency of the HTA process, although other factors (including institutional design, human resources - "brain drain" to the private sector, and key actors' disinterest in reform) were also mentioned[71]. Recent work on the "practical" transparency of HTA bodies[71–73] may perhaps contribute to making transparency a better defined variable amenable to both qualitative and quantitative inquiry. As STS scholars emphasise, procedural choices and guidelines both reflect and result in privileging certain forms of rationality and

certain voices and perspectives over others, amplifying or creating new power disparities in the process[74].

Critical STS scholars see HTA as actively changing broader socio-political contexts. HTA, alongside other types of regulation, influences the very process of innovation, affecting the balance of social power by making new alliances possible, as well as by prioritizing or legitimizing particular actors and select forms of evidence and interest expression[36,75]. Most importantly, HTA is both driven by and contributing to broader social tendencies, such as the shift toward the medicalization of society, the shift toward neoliberal governance and the consolidation of the regulatory state, and the "evolving modes" of scientific knowledge production, subsumed under labels such as regulatory science, trans-science, or post-normal science[75]. We should note that health economists have recently also started to devise empirical strategies to study the broader effects of HTA beyond P&R[76].

Some HTA practitioners have proposed that HTA can complement and enhance evidence-based medicine (EBM) by giving doctors and patients information that goes beyond efficacy and effectiveness, concentrating on those outcomes that are most relevant and significant to the patient[77]. HTA is intended to influence clinical practice (including prescription practice) through clinical guidelines, and patient behavior via publicly available appraisals. Empirical social scientists, and especially STS scholars, have, however, challenged whether access to the type of evidence ranked highly by HTA impacts clinical behavior in practice[78]; whether EBM's impact on clinical behavior is a positive development[79]; and whether what HTA provides is commensurate with what patients seek[74,80].

3.2.3. How do the social and political contexts affect HTA decision-making?

A final, broad strand of the social science literature examines how HTA decisions are made in practice, within particular social and political contexts. Established HTA literature has been aware of the tension between HTA's technocratic qualities and the political nature of rationing healthcare resources[62,81] but often treats it as a "barrier to HTA adoption" by decision-makers that can be

overcome by improving HTA methods (e.g.[82]). In contrast, the political science and sociology literature takes the politics of HTA as their main focus. It is particularly interested in "backstage decision-making"[83], which it most often investigates with the help of ethnographic methods such as semi-structured interviews, observation, and participation in HTA bodies' meetings. It frequently focuses on "crucial case studies" of often controversial technologies[84–86] or studies decision-making in individual HTA institutions[72,87–89]. Two key subtopics emerge from this literature: the interests and behaviours of main "stakeholders" and the nature and role of what counts as "evidence" in HTA.

First, "stakeholder involvement" is an unquestionable normative principle of HTA[90], very much in line with the current paradigm of (good) governance [91]. In this context, stakeholders are quite often synonymous with patient advocacy organisations, and much of the HTA policy analysis literature seeks to assess (and possibly enhance) their involvement in HTA processes[92–97]. STS scholars and sociologists ask very similar questions: they study the rationale and determinants of patient participation, its institutional frameworks, formal and informal modes of involvement, and the mechanisms for considering patient contributions[98–100].

The empirical STS literature echoes the HTA analysts' concerns that patient involvement is, in one way or another, limited. In meetings of the English National Institute for Health and Care Excellence (NICE), patient voices have been found to have a "symbolic and representative" function, "relegated to the periphery of participation"[100], reflecting skewed power dynamics between experts and patients[98]. An Australian study found that these power differentials lead patients to strategically align with industry to amplify their views during the HTA process[101]. Quite often, these social scientists would agree with HTA practitioners' premise that more stakeholder (patient) engagement is necessary and desirable, although they place a much greater emphasis on informal practices in addition to formal rules of participation.

A more critical take on stakeholder involvement, rooted in political sociology / political economy, examines the roles of other actors than patients, including members of appraisal committees, clinical experts, policymakers and bureaucrats[71,72,102,103]. Just like work by established HTA analysts[87] and

scholars of pharmaceutical regulation[10], this literature examines the way various actors attempt to "game the system" by biasing or capturing HTA regulators. For instance, several studies of lobbying methods deployed by drug manufacturers in Poland to secure favourable HTA outcomes document a mixture of universal lobbying strategies, such as endorsements by clinical experts, coupled with context-dependent approaches, such as informal clique influence[102,103]. But manufacturers are not the only stakeholders with vested interests in HTA. There are also HTA consultancies assisting the industry in developing evidence submissions, who may be interested primarily in creating business for themselves, rather than creating or reforming HTA systems[71,102], and the "epistemic community" of HTA experts, who have potential material or reputational gains from creating and maintaining HTA institutions[36,50]. In addition, politicians and bureaucrats have a strong stake in limiting impact on public budgets. This may result in additional pressure on HTA bodies to avoid, delay or impose restrictions on positive reimbursement decisions; this influence can be formal[86] or informal[71].

Second, an alternative way of considering HTA practice as part of a socio-political context is to shift focus from actors to evidence. Close to the STS take on patient involvement, this scholarship asks about the forms of expertise and evidence privileged by HTA processes, how they interact and why some of them seem to be more influential than others[84,98,100]. A key conclusion reached by this literature points to the limitations on objectivity and rationality in HTA decision-making[9,88]. The question of what counts as evidence is non-trivial – HTA privileges "hard", quantitative evidence conveyed by experts in economics and medicine[36,74], while lived experience of practitioners and patients is seen as less important[100,101,104,105]. Rationality is further limited by an issue well-known to health economists and other HTA analysts: the uncertainty of evidence. Moving beyond the statistical understanding of uncertainty [84], qualitative studies of HTA decision-making see uncertainty as being present within the "epistemology, procedures, interpersonal relations, and technicality" of HTA[88], which result in a decision-making process that is subtly biased. Crucially, the HTA process is characterized by a "negotiation with the use of pragmatic methods to navigate through complexity and layers of uncertainty"[88]. With high uncertainty, the scope for rational-comprehensive decision-making becomes limited, and is supplemented by decision-making based on other criteria, for instance trust in

other stakeholders[106]. With their focus on formal and informal practices, social scientists thus show how far removed concrete processes may be from HTA's basic promise of purely rational "evidence-based" policy.

4. Discussion & Conclusions

This paper summarised the growing empirical social science literature on HTA from political science, sociology and adjacent (sub)disciplines of STS, political sociology and political economy in a narrative review organised around the key themes of the literature. We are conscious of five potential biases of this paper. First, we focused on (sub)disciplines with which we are most familiar. Second, we considered empirical papers only. Third, we included works that identify health technology assessment as their key topic. As a result of these biases, we may have omitted work from other empirical disciplines, and we have ignored works from political and social theory and humanities or law altogether. We have also excluded closely related social scientific scholarship on priority-setting, rationing, reimbursement decisions, or value, which often addresses similar questions to the study of HTA. Fourth, we reviewed exclusively works in English, possibly introducing a NICE-bias. While this may well be a faithful reflection of the literature[107], we may be perpetuating an Anglo-centric perspective on the study of HTA to the detriment of alternative views. Fifth, by juxtaposing the social scientific literature to the more established HTA policy analysis, we may have inadvertently oversimplified existing health economic scholarship.

We argue that social scientists peer into the black box of "political will", "barriers and opportunities", "societal values", or "institutional capacity" that are usually referred to in passing by most of the established literature on HTA. Ontologically, the universe social scientists seek to understand comprises two sets of entities: institutions/processes (e.g. HTA bodies and approaches) and actors/stakeholders (e.g. patient organisations, bureaucrats, manufacturers), which are used interchangeably as dependent and independent variables against each other. These two foci are near-exhaustive, with most topics falling into one of the two categories. For instance, common interests of

HTA policy analysis such as transparency or methodology of HTA, are often conceived as institutional traits, while topics such as uncertainty of evidence are conceptualised as resulting from social construction or negotiation by individual actors.

This ontological orientation reflects broader trends in sociology and political science since the 1980s, namely the ascendance of new institutionalism, emphasising the role of institutions, defined broadly as organizations, norms and practices, in decision-making[108,109], and the rise of actor-network theory, interested in social mechanisms involved in the operation of networks formed by "human" and "non-human" actors, such as technologies[110] Similarly, the more critical approaches to HTA in our review, mainly from political economy and STS, are consistent with major critiques of the capitalist state[111–113], viewing organisations as sites of strategic struggle for resources and control between competing social forces. That said, notable from our review is the limited interest of social scientists of HTA in the analytical category of culture, including values (with exceptions[51]). This contrasts, in particular, with some areas of medical sociology, in which culture plays a prominent role in explaining how organisations deliver patient care[114].

Methodologically, social science studies of HTA tend to emphasise the "depth" of explanation over its "breadth". They tend to study "crucial" single cases or adopt a small-N design based on a limited number of key similarities or differences between the studied HTA systems (with exceptions[70]). These studies tend to provide qualitative "thick description"[115] of two-way relationships between HTA and its social context. While these small-N studies may, in aggregate, help identify broad patterns, their ability to provide generalizable answers remains limited by the idiosyncratic and ever-evolving nature of national HTA systems.

What insights, then, can social science offer to HTA practitioners? It is certainly too early to expect, as this themed section suggests, an integrated account of the relative role of "culture, institutions and values" in many dimensions of HTA. Questions of interest for social scientists as "outsiders" or "strangers"[116] may also be uncomfortable for those "on the inside", especially when these questions problematize or even challenge some of the key principles of HTA as a science and practice (e.g.:

"Can evidence-based, rational decisions be reached under high uncertainty?", "Is stakeholder involvement universally beneficial?"). Compounding the potential frustrations may be fundamental differences in disciplinary training between social scientists and HTA practitioners. Here, this division could perhaps be overcome via closer collaboration and shared disciplinary understanding (which this themed section fosters), similarly to the initially strained but today well-established relationship between medicine and medical sociology[117]. One possible step towards greater collaboration would be to incorporate social scientific questions more closely into future HTA research projects. Another would be to emphasize social science in HTA curricula.

A more integrated collaboration could also help address the big question so far neglected by both social science and most HTA policy analysis[118–120]: what is HTA actually good for? Assessing the real-world monetary, health and broader societal effects of HTA as currently implemented in countries around the world will require the expertise of not only traditional HTA practitioners, but also the unique perspectives of social science (as well as the humanities, law and other disciplines).

References

1. Béland D. Policy change and health care research. *J Health Polit Policy Law*. 2010;35(4):615-641. doi:10.1215/03616878-2010-019
2. Tuohy CH. *Accidental Logics: The Dynamics of Change in the Health Care Arena in the United States, Britain, and Canada*. 1st ed. Oxford University Press, USA; 1999. http://www.amazon.com/dp/0195128214.
3. Immergut EM. *Health Politics: Interests and Institutions in Western Europe*. Cambridge: Cambridge University Press; 1992. http://www.google.com/books?id=KKNOAAAAIAAJ.
4. Greer S, Jacobson P. Health care reform and federalism. *J Health Polit Policy Law*. 2010;35(2):203-226. doi:10.1215/03616878-2009-050
5. Marmor TR, Klein R. *Politics, Health, and Health Care: Selected Essays*. New Haven, U. S. A.: Yale University Press; 2012.
6. Goddard M, Hauck K, Smith PC. Priority setting in health - a political economy perspective. *Health Econ Policy Law*. 2006;1(Pt 1):79-90. doi:10.1017/S1744133105001040

7. Williams I. Institutions, cost-effectiveness analysis and healthcare rationing : the example of coverage in the English National Health Service. *Policy Polit*. 2013;41(2):223-239.

8. Russell J. The rationality of rationing: a rhetorical policy analysis of deliberations about resource allocation in the NHS. 2017. https://ora.ox.ac.uk/objects/uuid:5546f951-6747-40a6-901d-86d2b1443986.

9. Russell J, Greenhalgh T. Being "rational" and being "human": How National Health Service rationing decisions are constructed as rational by resource allocation panels. *Heal (United Kingdom)*. 2014;18(5):441-457. doi:10.1177/1363459313507586

10. Davis C, Abraham J. *Unhealthy Pharmaceutical Regulation: Innovation, Politics and Promissory Science*. Springer; 2013.

11. Hogarth S. Neoliberal technocracy: Explaining how and why the US Food and Drug Administration has championed pharmacogenomics. *Soc Sci Med*. 2015;131:255-262. doi:10.1016/j.socscimed.2015.01.023

12. Abraham J, Lewis G. Regulating medicines in Europe: competition, expertise and public health. 2000.

13. Abraham J. Sociology of pharmaceuticals development and regulation: A realist empirical research programme. *Sociol Heal Illn*. 2008;30(6):869-885. doi:10.1111/j.1467-9566.2008.01101.x

14. Hauray B. From Regulatory Knowledge to Regulatory Decisions: The European Evaluation of Medicines. *Minerva*. 2017;55(2):187-208. doi:10.1007/s11024-017-9323-3

15. May C, Mort M, Williams T, Mair F, Gask L. Health technology assessment in its local contexts: Studies of telehealthcare. *Soc Sci Med*. 2003;57(4):697-710. doi:10.1016/S0277-9536(02)00419-7

16. Mongeon P, Paul-Hus A. The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics*. 2016;106(1):213-228. doi:10.1007/s11192-015-1765-5

17. Harzing AW, Alakangas S. Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison. *Scientometrics*. 2016;106(2):787-804. doi:10.1007/s11192-015-1798-9

18. Papaioannou D, Sutton A, Carroll C, Booth A, Wong R. Literature searching for social science systematic reviews: Consideration of a range of search techniques. *Health Info Libr J*. 2010;27(2):114-122. doi:10.1111/j.1471-1842.2009.00863.x

19. French RD. Is It Time to Give Up on Evidence-based Policy? Four Answers. *Policy Polit*. 2018;47(1):151-168. doi:10.1332/030557318x15333033508220

20. Booth A. Cochrane or cock-eyed? How should we conduct systematic reviews of qualitative research? 2001.

21. Dixon-Woods M, Agarwal S, Jones D, Young B, Sutton A. Synthesising qualitative and quantitative evidence: a review of possible methods. *J Heal Serv Res Policy*. 2005;10(1):45-53. doi:10.1258/1355819052801804

22. Eddy D. Health technology assessment and evidence-based medicine: what are we talking about? *Value Health*. 2009;12 Suppl 2(stage 5):S6-7. doi:10.1111/j.1524-4733.2009.00551.x

23. Henshall C, Mardhani-Bayne L, Frønsdal KB, Klemp M. Interactions between health technology assessment, coverage, and regulatory processes: Emerging issues, goals, and opportunities. *Int J Technol Assess Health Care*. 2011;27(3):253-260. doi:10.1017/S0266462311000262

24. Drummond M, Jönsson B, Rutten F, Stargardt T. Reimbursement of pharmaceuticals: Reference pricing versus health technology assessment. *Eur J Heal Econ*. 2011;12(3):263-271. doi:10.1007/s10198-010-0274-y

25. Webster A. Health technology assessment: A sociological commentary on reflexive innovation. *Int J Technol Assess Health Care*. 2004;20(1):61-66. doi:10.1017/S0266462304000790

26. Oliver A, Mossialos E, Robinson R. Health technology assessment and its influence on health-care priority setting. *Int J Technol Assess Health Care*. 2004;20(01). doi:10.1017/S026646230400073X

27. Bellemare CA, Dagenais P, K.-Bédard S, et al. Ethics in Health Technology Assessment: a Systematic Review. *Int J Technol Assess Health Care*. 2018:1-11. doi:10.1017/S0266462318000508

28. Hofmann BM. Why ethics should be part of health technology assessment. *Int J Technol Assess Health Care*. 2008;24(4):423-429. doi:http://dx.doi.org/10.1017/S0266462308080550

29. Daniels N, van der Wilt GJ. Health Technology Assessment, Deliberative Process, and Ethically Contested Issues. *Int J Technol Assess Health Care*. 2016;32(1-2):10-15. doi:10.1017/S0266462316000155

30. Syrett K. Deconstructing Deliberation in the Appraisal of Medical Technologies: Nicely Does it? *Mod Law Rev*. 2006;69(6):896-894. doi:10.1111/j.1468-2230.2006.00615.x

31. Drummond M, Banta D. Health technology assessment in the United Kingdom. *Int J Technol Assess Health Care*. 2009;25 Suppl 1:178-181. doi:10.1017/S0266462309090618

32. Gulácsi L, Brodszky V, Péntek M, Varga S, Vas G, Boncz I. History of health technology assessment in Hungary. *Int J Technol Assess Health Care*. 2009;25 Suppl 1:120-126. doi:10.1017/S0266462309090527

33. Battista RN, Hodge MJ. The "natural history" of health technology assessment. *Int J Technol Assess Health Care*. 2009;25(S1):281. doi:10.1017/S026646230909076X

34. Sampietro-Colom L. Once upon a time … The rise and use of HTA throughout the world. *Michael*. 2012;9:90-94.

35. Banta D, Kristensen FB, Jonsson E. A history of health technology assessment at the European level. *Int J Technol Assess Health Care*. 2009;25 Suppl 1:68-73. doi:10.1017/S0266462309090448

36. Faulkner A. "Strange bedfellows" in the laboratory of the NHS? An analysis of the new science of health technology assessment in the United Kingdom. *Sociol Med Sci Technol*. 1997;(Webster 1994):183-207. doi:10.1111/1467-9566.00091

37. O'Donnell JC, Pham S V, Pashos CL, Miller DW, Smith MD. Health technology assessment: lessons learned from around the world--an overview. *Value Health*. 2009;12 Suppl 2:S1-5. doi:10.1111/j.1524-4733.2009.00550.x

38. Fuchs S, Olberg B, Panteli D, Perleth M, Busse R. HTA of medical devices: Challenges and ideas for the future from a European perspective. *Health Policy (New York)*. 2017;121(3):215-229. doi:10.1016/j.healthpol.2016.08.010

39. Oortwijn W, Broos P, Vondeling H, Banta D, Todorova L. Mapping of health technology assessment in selected countries. *Int J Technol Assess Health Care*. 2013;29(4):424-434. doi:10.1017/S0266462313000469

40. Panteli D, Eckhardt H, Nolting A, Busse R, Kulig M. From market access to patient access: overview of evidence-based approaches for the reimbursement and pricing of pharmaceuticals

in 36 European countries. *Heal Res Policy Syst*. 2015;13(1):39. doi:10.1186/s12961-015-0028-5

41. Cheung KL, Evers SMAA, de Vries H, Hiligsmann M. Most Important Barriers and Facilitators Regarding the Use of Health Technology Assessment. *Int J Technol Assess Health Care*. 2017;33(02):183-191. doi:10.1017/S0266462317000290

42. Sorenson C, Drummond M, Kristensen FB, Busse R. How can the impact of health technology assessments be enhanced? *World Heal Organ Policy Br*. 2008. http://www.euro.who.int/document/hsm/2_hsc08_epb_5.pdf.

43. McGregor M. What decision-makers want and what they have been getting. *Value Heal*. 2006;9(3):181-185. doi:10.1111/j.1524-4733.2006.00098.x

44. Van Herck P, Annemans L, Sermeus W, Ramaekers D. Evidence-based health care policy in reimbursement decisions: lessons from a series of six equivocal case-studies. *PLoS One*. 2013;8(10). doi:10.1371/journal.pone.0078662

45. Banta D, Jonsson E. History of HTA: Introduction. *Int J Technol Assess Health Care*. 2009;25 Suppl 1:1-6. doi:10.1017/S0266462309090321

46. Oortwijn W, Mathijssen J, Banta D. The role of health technology assessment on pharmaceutical reimbursement in selected middle-income countries. *Health Policy*. 2010;95(2-3):174-184. doi:10.1016/j.healthpol.2009.12.008

47. Danko D. Health technology assessment in middle-income countries: recommendations for a balanced assessment system ´. *J Mark Access Heal Policy*. 2014;1:1-10.

48. Löblová O. Three worlds of health technology assessment: explaining patterns of diffusion of HTA agencies in Europe. *Health Econ Policy Law*. 2016;11(03):253-273. doi:10.1017/S1744133115000444

49. Löblová O. When Epistemic Communities Fail: Exploring the Mechanism of Policy Influence. *Policy Stud J*. 2018;46(1):160-189. doi:10.1111/psj.12213

50. Löblová O. Who's afraid of institutionalizing health technology assessment (HTA)?: Interests and policy positions on HTA in the Czech Republic. *Heal Econ Policy Law*. 2018;13(02):137-161. doi:10.1017/S174413311700024X

51. Klingler C, Shah SMB, Barron AJG, Wright JSF. Regulatory space and the contextual mediation of common functional pressures: Analyzing the factors that led to the German Efficiency Frontier approach. *Health Policy (New York)*. 2013;109(3):270-280. doi:10.1016/j.healthpol.2013.01.004

52. Shah SMB, Barron A, Klinger C, Wright JSF. A regulatory governance perspective on Health Technology Assessment (HTA) in Sweden. *Health Policy*. 2014;116(1):27-36. doi:10.1016/j.healthpol.2014.02.014

53. Barron AJG, Klinger C, Shah SMB, Wright JSF. A regulatory governance perspective on health technology assessment (HTA) in France: The contextual mediation of common functional pressures. *Health Policy*. 2015;119(2):137-146. doi:10.1016/j.healthpol.2014.10.002

54. Allen N, Pichler F, Wang T, Patel S, Salek S. Development of archetypes for non-ranking classification and comparison of European National Health Technology Assessment systems. *Health Policy*. 2013;113(3):305-312. doi:10.1016/j.healthpol.2013.09.007

55. Fierlbeck K, Gardner W, Levy A. New Public Governance in health care: Health Technology Assessment for Canadian pharmaceuticals. *Can Public Adm*. 2018;61(1):45-64. doi:10.1111/capa.12253

56. Landwehr C, Böhm K. Strategic Institutional Design: Two Case Studies of Non-Majoritarian Agencies in Health Care Priority-Setting. *Gov Oppos*. 2014:1-29. doi:10.1017/gov.2014.37

57. Landwehr C, Boehm K. Delegation and Institutional Design in Health-Care Rationing. *Governance*. 2011;24(4):665-688. http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0491.2011.01542.x/full. Accessed May 29, 2014.

58. Lopert R, Ruiz F, Chalkidou K. Applying rapid "de-facto" HTA in resource-limited settings: experience from Romania. *Health Policy*. 2013;112(3):202-208. doi:10.1016/j.healthpol.2013.07.019

59. Ozierański P, King L. The persistence of cliques in the post-communist state. The case of deniability in drug reimbursement policy in Poland. *Br J Sociol*. 2016;67(2):216-241. doi:10.1111/1468-4446.12193

60. Wood M. Depoliticisation, Resilience and the Herceptin Post-code Lottery Crisis: Holding Back the Tide. *Br J Polit Int Relations*. 2015;17(4):644-664. doi:10.1111/1467-856X.12060

61. Nahuis R, Boon WPC. The impact of patient advocacy: the case of innovative breast cancer drug reimbursement. *Sociol Health Illn*. 2011;33(1):1-15. doi:10.1111/j.1467-9566.2010.01271.x

62. Buller JR. Managing Wicked Problems: The National Institute for health and Care Excellence and the Depoliticisation of Health Care Rationing. *Commonw Innov Rev*. 2017:4-13.

63. Crinson I. The Politics of Regulation within the 'Modernized' NHS: The Case of Beta Interferon and the 'Cost-Effective' Treatment of Multiple Sclerosis. *Crit Soc Policy*. 2004;24(1):30-49. doi:10.1177/0261018304241002

64. Akehurst RL, Abadie E, Renaudin N, Sarkozy F. Variation in Health Technology Assessment and Reimbursement Processes in Europe. *Value Heal*. 2016;20(1):67-76. doi:10.1016/j.jval.2016.08.725

65. Fischer KE, Heisser T, Stargardt T. Health benefit assessment of pharmaceuticals: An international comparison of decisions from Germany, England, Scotland and Australia. *Health Policy (New York)*. 2016;120(10):1115-1122. doi:10.1016/j.healthpol.2016.08.001

66. Allen N, Walker SR, Liberti L, Salek S. Health Technology Assessment (HTA) Case Studies: Factors Influencing Divergent HTA Reimbursement Recommendations in Australia, Canada, England, and Scotland. *Value Heal*. 2017;20(3):320-328. doi:10.1016/j.jval.2016.10.014

67. Nicod E, Kanavos P. Commonalities and differences in HTA outcomes: A comparative analysis of five countries and implications for coverage decisions. *Health Policy (New York)*. 2012;108(2-3):167-177. doi:10.1016/j.healthpol.2012.09.012

68. Allen N, Liberti L, Walker SR, Salek S. A comparison of reimbursement recommendations by European HTA agencies: Is there opportunity for further alignment? *Front Pharmacol*. 2017;8(JUN). doi:10.3389/fphar.2017.00384

69. Fischer KE, Rogowski WH, Leidl R, Stollenwerk B. Transparency vs. closed-door policy: Do process characteristics have an impact on the outcomes of coverage decisions? A statistical analysis. *Health Policy (New York)*. 2013;112(3):187-196. doi:10.1016/j.healthpol.2013.04.011

70. Böhm K, Landwehr C, Steiner N. What explains 'generosity' in the public financing of high-tech drugs? An empirical investigation of 25 OECD countries and 11 controversial drugs. *J Eur Soc Policy*. 2014;24(1):39-55. doi:10.1177/0958928713511280

71. Csanádi M, Löblová O, Ozierański P, et al. When health technology assessment is confidential and experts have no power: the case of Hungary. *Heal Econ Policy Law*. 2018.

doi:10.1017/S1744133118000051

72. Ozieranski P, McKee M, King L. The politics of health technology assessment in Poland. *Health Policy*. 2012;108(2-3):178-193. doi:10.1016/j.healthpol.2012.10.001

73. Ozierański P, Löblová O, Nicholls N, et al. Transparency in practice: Evidence from 'verification analyses' issued by the Polish Agency for Health Technology Assessment in 2012–2015. *Heal Econ Policy Law*. 2018:1-23. doi:10.1017/S1744133117000342

74. Lehoux P, Blume S. Technology Assessment and the Sociopolitics of Health Technologies. *J Health Polit Policy Law*. 2000;25(6):1083-1120. doi:10.1215/03616878-25-6-1083

75. Faulkner A. *Medical Technology into Healthcare and Society: A Sociology of Devices, Innovation and Governance*. Springer; 2009.

76. Grieve E, Hesselgreaves H, Wu O, et al. The Value of Health Technology Assessment : a mixed methods framework. 2017;6(2171):1-23.

77. Luce BR, Drummond M, Jönsson B, et al. EBM, HTA, and CER: Clearing the Confusion. *Milbank Q*. 2010;88(4):444-483. doi:10.1111/j.1468-0009.2010.00608.x

78. Tanenbaum SJ. Knowing and Acting in Medical Practice: The Epistemological Politics of Outcomes Research. *J Health Polit Policy Law*. 1994;19(1):27-44. doi:Doi 10.1215/03616878-19-1-27

79. Greenhalgh T, Howick J, Maskrey N. Evidence based medicine: a movement in crisis? *Bmj*. 2014;348(jun13 4):g3725-g3725. doi:10.1136/bmj.g3725

80. Brown PR. The dark side of hope and trust: Constructed expectations and the value-for-money regulation of new medicines. *Heal Sociol Rev*. 2011;20(4):410-422. doi:10.5172/hesr.2011.20.4.410

81. Syrett K. A technocratic fix to the "legitimacy problem"? The Blair government and health care rationing in the United Kingdom. *J Health Polit Policy Law*. 2003;28(4):715-746. http://jhppl.dukejournals.org/content/28/4/715.short. Accessed September 11, 2012.

82. Velasco Garrido M, Gerhardus A, Røttingen J-A, Busse R. Developing Health Technology Assessment to address health care system needs. *Health Policy*. 2010;94(3):196-202. doi:10.1016/j.healthpol.2009.10.002

83. Calnan M. Decisions of Value: Going Backstage Comment on "Contextual Factors Influencing Cost and Quality Decisions in Health and Care: A Structured Evidence Review and Narrative Synthesis." *Int J Heal Policy Manag*. 2018;7(11):1067-1069. doi:10.15171/ijhpm.2018.81

84. Moreira T. Health care rationing in an age of uncertainty: a conceptual model. *Soc Sci Med*. 2011;72(8):1333-1341. doi:10.1016/j.socscimed.2011.02.026

85. Hedgecoe A. *The Politics of Personalised Medicine: Pharmacogenetics in the Clinic*. Cambridge University Press; 2004.

86. Gornall J, Hoey A, Ozieranski P. A pill too hard to swallow: How the NHS is limiting access to high priced drugs. *BMJ*. 2016;354(July):1-5. doi:10.1136/bmj.i4117

87. Ferner RE, McDowell SE. How NICE may be outflanked. *BMJ Br Med J*. 2006;332(7552):1268.

88. Calnan M, Hashem F, Brown P. Still Elegantly Muddling Through? NICE and Uncertainty in Decision Making about the Rationing of Expensive Medicines in England. *Int J Heal Serv*. 2017;47(3):571-594. doi:10.1177/0020731416689552

89. Bryan S, Williams I, McIver S. Seeing the NICE side of cost-effectiveness analysis: a

qualitative investigation of the use of CEA in NICE technology appraisals. *Health Econ*. 2007;16(2):179-193.

90. Drummond MF, Schwartz JS, Jönsson B, et al. Key principles for the improved conduct of health technology assessments for resource allocation decisions. *Int J Technol Assess Health Care*. 2008;24(3):244-258; discussion 362-8. doi:10.1017/S0266462308080343

91. Rhodes RAW. The new governance: Governing without government. *Polit Stud*. 1996;44(4):652-667. doi:10.1111/j.1467-9248.1996.tb01747.x

92. Facey K, Boivin A, Gracia J, et al. Patients' perspectives in health technology assessment: a route to robust evidence and fair deliberation. *Int J Technol Assess Health Care*. 2010;26(3):334-340. doi:10.1017/S0266462310000395

93. Cavazza M, Jommi C. Stakeholders involvement by HTA Organisations: why is so different? *Health Policy*. 2012;105(2-3):236-245. doi:10.1016/j.healthpol.2012.01.012

94. Gagnon M-P, Desmartis M, Lepage-Savary D, et al. Introducing patients' and the public's perspectives to health technology assessment: A systematic review of international experiences. *Int J Technol Assess Health Care*. 2011;27(1):31-42. doi:10.1017/S0266462310001315

95. Menon D, Stafinski T. Role of patient and public participation in health technology assessment and coverage decisions. *Expert Rev Pharmacoecon Outcomes Res*. 2011;11(1):75-89. doi:10.1586/erp.10.82

96. Abelson J, Giacomini M, Lehoux P, Gauvin F-P. Bringing "the public" into health technology assessment and coverage policy decisions: from principles to practice. *Health Policy*. 2007;82(1):37-50. doi:10.1016/j.healthpol.2006.07.009

97. Kreis J, Schmidt H. Public Engagement in Health Technology Assessment and Coverage Decisions: A Study of Experiences in France, Germany, and the United Kingdom. *J Health Polit Policy Law*. 2013;38(1):89-122. doi:10.1215/03616878

98. Milewa T. Health technology adoption and the politics of governance in the UK. *Soc Sci Med*. 2006;63(12):3102-3112. doi:10.1016/j.socscimed.2006.08.009

99. Milewa T. Representation and legitimacy in health policy formulation at a national level: Perspectives from a study of health technology eligibility procedures in the United Kingdom. *Health Policy (New York)*. 2008;85(3):356-362. doi:10.1016/J.HEALTHPOL.2007.09.001

100. Hashem F, Calnan MW, Brown PR. Decision making in NICE single technological appraisals: How does NICE incorporate patient perspectives? *Heal Expect*. 2018;21(1):128-137. doi:10.1111/hex.12594

101. Lopes E, Carter D, Street J. Power relations and contrasting conceptions of evidence in patient-involvement processes used to inform health funding decisions in Australia. *Soc Sci Med*. 2015;135:84-91. doi:10.1016/j.socscimed.2015.04.021

102. Ozieranski P, King LP. *Governing Drug Reimbursement Policy in Poland : The Role of the State , Civil Society , and the Private Sector*. Theory and Society; 2017.

103. Ozieranski P, McKee M, King L. Pharmaceutical lobbying under postcommunism: universal or country-specific methods of securing state drug reimbursement in Poland? *Health Econ Policy Law*. 2012;7(2):175-195. doi:10.1017/S1744133111000168

104. Milewa T, Barry C. Health policy and the politics of evidence. *Soc Policy Adm*. 2005;39(5):498-512. doi:10.1111/j.1467-9515.2005.00452.x

105. May C. Mobilising modern facts: Health technology assessment and the politics of evidence. *Sociol Heal Illn*. 2006;28(5):513-532. doi:10.1111/j.1467-9566.2006.00505.x

106. Brown P, Hashem F, Calnan M. Trust, regulatory processes and NICE decision-making: Appraising cost-effectiveness models through appraising people and systems. *Soc Stud Sci*. 2016;46(1):87-111. doi:10.1177/0306312715609699

107. Benoit C, Gorry P. Health Technology Assessment: the Scientific Career of a Policy Concept. *Int J Technol Assess Health Care*. 2017;1:1-7. doi:10.1017/S0266462317000186

108. Hall PA, Taylor RCR. Political Science and the Three New Institutionalisms. *Polit Stud*. 1996;44(5):936-957. doi:Article

109. Koelble TA. The new institutionalism in political science and sociology. *Comp Polit*. 1995;27(2):231-243.

110. Latour B. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press; 2005.

111. Miliband R. *The State in Capitalist Society*. New York: Basic Books; 1969.

112. Domhoff GW. *Who Rules America?: Power and Politics in the Year 2000*. McGraw-Hill Humanities, Social Sciences & World Languages; 1998.

113. Lukes S. *Power: A Radical View*. Macmillan International Higher Education; 2004.

114. Dixon-Woods M, Baker R, Charles K, et al. Culture and behaviour in the English National Health Service: overview of lessons from a large multimethod study. *BMJ Qual Saf*. 2014;23(2):106-115.

115. Geertz C. *Thick Description: The Interpretation of Cultures*. New York: Basic Books; 1973.

116. Simmel G. *On Individuality and Social Forms: Selected Writings*. Chicago: University of Chicago Press; 1971.

117. Cockerham WC, Scambler G. Medical sociology and sociological theory. In: Cockerham WC, ed. *The New Blackwell Companion to Medical Sociology. Oxford, UK: Wiley-Blackwell*. 2016th ed. Chichester: John Wiley & Sons; 2016:3-26.

118. Löblová O. What has health technology assessment ever done for us? *J Health Serv Res Policy*. 2017;23(2):135581961772554. doi:10.1177/1355819617725545

119. Hailey D, Werkö S, Rosén M, et al. Influence of Health Technology Assessment and Its Measurement. *Int J Technol Assess Health Care*. 2016;32(06):376-384. doi:10.1017/S0266462316000611

120. Lehoux P, Battista RN, Lance JM. Monitoring Health Technology Assessment Agencies. *Can J Prog Eval*. 2000;Vol. 15(No. 2):1-33.

Appendix 1: List of empirical social science publications on health technology assessment

Barron AJG, Klinger C, Shah SMB, Wright JSF. A regulatory governance perspective on health technology assessment (HTA) in France: The contextual mediation of common functional pressures. Health Policy. 2015;119(2):137-146. doi:10.1016/j.healthpol.2014.10.002.

Böhm K, Landwehr C, Steiner N. What explains 'generosity' in the public financing of high-tech drugs? An empirical investigation of 25 OECD countries and 11 controversial drugs. J Eur Soc Policy. 2014;24(1):39-55. doi:10.1177/0958928713511280.

Brown P, Hashem F, Calnan M. Trust, regulatory processes and NICE decision-making: Appraising cost-effectiveness models through appraising people and systems. Soc Stud Sci. 2016;46(1):87-111. doi:10.1177/0306312715609699.

Brown PR. The dark side of hope and trust: Constructed expectations and the value-for-money regulation of new medicines. Heal Sociol Rev. 2011;20(4):410-422. doi:10.5172/hesr.2011.20.4.410.

Bryan S, Williams I, McIver S. Seeing the NICE side of cost-effectiveness analysis: a qualitative investigation of the use of CEA in NICE technology appraisals. Health Econ. 2007;16(2):179-193.

Buller JR. Managing Wicked Problems: The National Institute for health and Care Excellence and the Depoliticisation of Health Care Rationing. Commonw Innov Rev. 2017:4-13.

Calnan M, Hashem F, Brown P. Still Elegantly Muddling Through? NICE and Uncertainty in Decision Making about the Rationing of Expensive Medicines in England. Int J Heal Serv. 2017;47(3):571-594. doi:10.1177/0020731416689552.

Calnan M. Decisions of Value: Going Backstage Comment on "Contextual Factors Influencing Cost and Quality Decisions in Health and Care: A Structured Evidence Review and Narrative Synthesis." Int J Heal Policy Manag. 2018;7(11):1067-1069. doi:10.15171/ijhpm.2018.81.

Crinson I. The Politics of Regulation within the 'Modernized' NHS: The Case of Beta Interferon and the 'Cost-Effective' Treatment of Multiple Sclerosis. Crit Soc Policy. 2004;24(1):30-49. doi:10.1177/0261018304241002.

Csanádi M, Löblová O, Ozierański P, et al. When health technology assessment is confidential and experts have no power: the case of Hungary. Heal Econ Policy Law. 2018. doi:10.1017/S1744133118000051.

Faulkner A. “Strange bedfellows” in the laboratory of the NHS? An analysis of the new science of health technology assessment in the United Kingdom. Sociol Med Sci Technol. 1997;(Webster 1994):183-207. doi:10.1111/1467-9566.00091.

Faulkner A. Medical Technology into Healthcare and Society: A Sociology of Devices, Innovation and Governance. Springer; 2009.

Ferner RE, McDowell SE. How NICE may be outflanked. BMJ Br Med J. 2006;332(7552):1268.

Fierlbeck K, Gardner W, Levy A. New Public Governance in health care: Health Technology Assessment for Canadian pharmaceuticals. Can Public Adm. 2018;61(1):45-64. doi:10.1111/capa.12253.

Gornall J, Hoey A, Ozieranski P. A pill too hard to swallow: How the NHS is limiting access to high priced drugs. BMJ. 2016;354(July):1-5. doi:10.1136/bmj.i4117.

Greenhalgh T, Howick J, Maskrey N. Evidence based medicine: a movement in crisis? Bmj. 2014;348(jun13 4):g3725-g3725. doi:10.1136/bmj.g3725.

Hashem F, Calnan MW, Brown PR. Decision making in NICE single technological appraisals: How does NICE incorporate patient perspectives? Heal Expect. 2018;21(1):128-137. doi:10.1111/hex.12594.

Hedgecoe A. The Politics of Personalised Medicine: Pharmacogenetics in the Clinic. Cambridge University Press; 2004.

Klingler C, Shah SMB, Barron AJG, Wright JSF. Regulatory space and the contextual mediation of common functional pressures: Analyzing the factors that led to the German Efficiency Frontier approach. Health Policy (New York). 2013;109(3):270-280. doi:10.1016/j.healthpol.2013.01.004.

Landwehr C, Boehm K. Delegation and Institutional Design in Health-Care Rationing. Governance. 2011;24(4):665-688. http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0491.2011.01542.x/full. Accessed May 29, 2014.

Landwehr C, Böhm K. Strategic Institutional Design: Two Case Studies of Non-Majoritarian Agencies in Health Care Priority-Setting. Gov Oppos. 2014:1-29. doi:10.1017/gov.2014.37.

Lehoux P, Blume S. Technology Assessment and the Sociopolitics of Health Technologies. J Health Polit Policy Law. 2000;25(6):1083-1120. doi:10.1215/03616878-25-6-1083.

Löblová O. Three worlds of health technology assessment: explaining patterns of diffusion of HTA agencies in Europe. Health Econ Policy Law. 2016;11(03):253-273. doi:10.1017/S1744133115000444.

Löblová O. What has health technology assessment ever done for us? J Health Serv Res Policy. 2017;23(2):135581961772554. doi:10.1177/1355819617725545.

Löblová O. When Epistemic Communities Fail: Exploring the Mechanism of Policy Influence. Policy Stud J. 2018;46(1):160-189. doi:10.1111/psj.12213.

Löblová O. Who's afraid of institutionalizing health technology assessment (HTA)?: Interests and policy positions on HTA in the Czech Republic. Heal Econ Policy Law. 2018;13(02):137-161. doi:10.1017/S174413311700024X.

Lopes E, Carter D, Street J. Power relations and contrasting conceptions of evidence in patient-involvement processes used to inform health funding decisions in Australia. Soc Sci Med. 2015;135:84-91. doi:10.1016/j.socscimed.2015.04.021.

May C, Mort M, Williams T, Mair F, Gask L. Health technology assessment in its local contexts: Studies of telehealthcare. Soc Sci Med. 2003;57(4):697-710. doi:10.1016/S0277-9536(02)00419-7.

May C. Mobilising modern facts: Health technology assessment and the politics of evidence. Sociol Heal Illn. 2006;28(5):513-532. doi:10.1111/j.1467-9566.2006.00505.x.

Milewa T, Barry C. Health policy and the politics of evidence. Soc Policy Adm. 2005;39(5):498-512. doi:10.1111/j.1467-9515.2005.00452.x.

Milewa T. Health technology adoption and the politics of governance in the UK. Soc Sci Med. 2006;63(12):3102-3112. doi:10.1016/j.socscimed.2006.08.009.

Milewa T. Representation and legitimacy in health policy formulation at a national level: Perspectives from a study of health technology eligibility procedures in the United Kingdom. Health Policy (New York). 2008;85(3):356-362. doi:10.1016/J.HEALTHPOL.2007.09.001.

Moreira T. Health care rationing in an age of uncertainty: a conceptual model. Soc Sci Med. 2011;72(8):1333-1341. doi:10.1016/j.socscimed.2011.02.026.

Nahuis R, Boon WPC. The impact of patient advocacy: the case of innovative breast cancer drug reimbursement. Sociol Health Illn. 2011;33(1):1-15. doi:10.1111/j.1467-9566.2010.01271.x.

Ozierański P, King L. The persistence of cliques in the post-communist state. The case of deniability in drug reimbursement policy in Poland. Br J Sociol. 2016;67(2):216-241. doi:10.1111/1468-4446.12193.

Ozieranski P, King LP. Governing Drug Reimbursement Policy in Poland : The Role of the State , Civil Society , and the Private Sector. Theory and Society; 2017.

Ozierański P, Löblová O, Nicholls N, et al. Transparency in practice: Evidence from 'verification analyses' issued by the Polish Agency for Health Technology Assessment in 2012–2015. Heal Econ Policy Law. 2018:1-23. doi:10.1017/S1744133117000342.

Ozieranski P, McKee M, King L. Pharmaceutical lobbying under postcommunism: universal or country-specific methods of securing state drug reimbursement in Poland? Health Econ Policy Law. 2012;7(2):175-195. doi:10.1017/S1744133111000168.

Ozieranski P, McKee M, King L. The politics of health technology assessment in Poland. Health Policy. 2012;108(2-3):178-193. doi:10.1016/j.healthpol.2012.10.001.

Shah SMB, Barron A, Klinger C, Wright JSF. A regulatory governance perspective on Health Technology Assessment (HTA) in Sweden. Health Policy. 2014;116(1):27-36. doi:10.1016/j.healthpol.2014.02.014.

Wood M. Depoliticisation, Resilience and the Herceptin Post-code Lottery Crisis: Holding Back the Tide. Br J Polit Int Relations. 2015;17(4):644-664. doi:10.1111/1467-856X.12060.